

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions, including listings, of claims in the application.

Listing of Claims

Claim 1 (currently amended): A method to enable the assessment of the growth rate and death rate of a micro-organism within a chosen time period in an environment of interest by introducing into said micro-organism at least two reporter genes, which method is characterised in that

a) said reporter genes code for luminescent and/or fluorescent products and within said time period and environment at least two said products of the following are produced:

i) ~~an essentially~~ a stable product produced in a step (a), within the environment of interest, essentially known proportion to the total amount of cells of said micro-organism that are or have been alive within said chosen time period,

ii) a product present in said environment of interest in an essentially known proportion to the amount of cells alive at any moment within said chosen time period, and

iii) ~~an essentially~~ a stable product produced in a step (a), within the environment of interest, essentially known proportion to the total amount of cells of said micro-organism that have died within said chosen time period,

and said products can be measured through their luminescence and/or fluorescence;

b) said micro-organism is incubated within the environment of interest and said luminescence and/or fluorescence is detected after said chosen time period, and

c) the growth and death rate of the said micro-organism is assessed based on at least two of the following:

- i) the known proportion of luminescence or fluorescence to the amount of cells alive after any said chosen time period,
- ii) the known proportion of luminescence or fluorescence to the total amount of cells that are or have been alive within any said chosen time period, and
- iii) the known proportion of luminescence or fluorescence to the total amount of cells that have died within any said chosen time period.

Claim 2 (original): The method according to claim 1 characterised in that said micro-organism is a gram negative bacteria, e.g. *Escherichia coli*.

Claim 3 (previously presented): The method according to claim 1 characterised in that

- a) one reporter gene coding for a luminescent product is luciferase, which is used for the determination of amount of cells alive at any moment within said chosen time period, and
- b) another reporter gene coding for a fluorescent product is green fluorescent protein (GFP), which is used for the determination of total amount of cells of said micro-organism that are or have been alive within said chosen time period.

Claim 4 (previously presented): The method according to claim 1 characterised in that said reporter genes are introduced into said micro-organism in a plasmid.

Claim 5 (previously presented): The method according to claim 3 characterised in that said plasmid is pGFP+luc* (SEQ ID NO: 1).

Claim 6 (previously presented): The method according to claim 2 characterised in that

- a) one reporter gene coding for a luminescent product is luciferase, which is used for the determination of amount of cells alive at any moment within said chosen time period, and

Application No.: 09/980,585
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b) another reporter gene coding for a fluorescent product is green fluorescent protein (GFP), which is used for the determination of total amount of cells of said micro-organism that are or have been alive within said chosen time period.

Claim 7 (previously presented): The method according to claim 2 characterised in that said reporter genes are introduced into said micro-organism in a plasmid.

Claim 8 (previously presented): The method according to claim 4 characterised in that said plasmid is pGFP+luc* (SEQ ID NO: 1).

Claim 9 (previously presented): The method according to claim 6 characterised in that said plasmid is pGFP+luc* (SEQ ID NO: 1).

Claim 10 (previously presented): The method according to claim 7 characterised in that said plasmid is pGFP+luc* (SEQ ID NO: 1).